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L1: Entry 1 of 2

File: DWPI

Jul 1, 1997

DERWENT-ACC-NO: 1994-318238

DERWENT-WEEK: 199736

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TITLE: Device for in-line coating of printing material in  
offset printing machine - involves at least two colour  
application units each with print cylinder, forme cylinder and  
applicator roller

INVENTOR: HARTUNG, G; JUNG, U ; SCHNEIDER, J

PATENT-ASSIGNEE:

ASSIGNEE

CODE

MAN ROLAND DRUCKMASCH AG

MAUG

PRIORITY-DATA: 1993DE-0005552 (April 16, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
ES 2101375 T3	July 1, 1997	N/A	000	B41F023/08
EP 620115 A1	October 19, 1994	G	005	B41F023/08
EP 620115 B1	April 23, 1997	G	006	B41F023/08
DE 59402478 G	May 28, 1997	N/A	000	B41F023/08
US 5638752 A	June 17, 1997	N/A	008	B41F007/06

DESIGNATED-STATES: AT BE CH DE ES FR GB IT LI NL SE AT BE CH DE  
ES FR GB IT LI NL SECITED-DOCUMENTS: DE 3046257; DE 3941571 ; DE 4213024 ; EP 574124  
; US 5176077 ; EP 543385

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
ES 2101375T3	March 12, 1994	1994EP-0103832	N/A
ES 2101375T3		EP 620115	Based on
EP 620115A1	March 12, 1994	1994EP-0103832	N/A
EP 620115B1	March 12, 1994	1994EP-0103832	N/A
DE59402478G	March 12, 1994	1994DE-0502478	N/A
DE59402478G	March 12, 1994	1994EP-0103832	N/A
DE59402478G		EP 620115	Based on
US 5638752A	April 4, 1994	1994US-0222087	Cont of
US 5638752A	July 27, 1995	1995US-0507846	N/A

INT-CL (IPC): B41F 5/24; B41F 7/06; B41F 23/08; B41F 31/08

ABSTRACTED-PUB-NO: EP 620115A  
BASIC-ABSTRACT:

Each colour application unit contains a print cylinder (8), a form cylinder (10) and an application roller (11,14) and the colour unit arranged ahead of the corresp. sheet running device is formed as a flexoprint mechanism (6). In the flexo-print mechanism an application roller (11) is provided, on which a chamber doctor (12) is arranged, whereby the application roller (11) is formed as a grid roller.

To the flexo-print mechanism (6) a conventional colour application unit (7) is directly or indirectly fitted and in the colour application unit (7) an application roller (14) is provided, for which a controlled feed roller (13) is fitted for formation of a common controlled feed gap.

USE/ADVANTAGE - Problemless inline processing of rapidly evaporating printing colours with high pigment contents.

ABSTRACTED-PUB-NO:

EP 620115B

EQUIVALENT-ABSTRACTS:

Device in a rotary printing press for multi-colour off-set printing for coating material to be printed with at least two varnishing units, wherein each varnishing unit has an impression cylinder (8), a forme cylinder (10) and an applicator roller (11,14), and the varnishing unit arranged upstream corresponding to the sheet running direction is constructed as a flexo print unit (6), wherein the flexo print unit (6) consists of the following elements: a relief forme carrying forme cylinder (10.1) which is in contact with the impression cylinder (8.1), an applicator roller (11) with a raster structure, which is in contact with the forme cylinder (10.1) and a settable-on chamber doctor (12) which is connected with a feed pump for liquid feed and a suction pump for liquid return wherein directly or indirectly arranged after the flexo print unit (6) is a varnishing unit (7) and wherein the varnishing unit (7) an applicator roller (14) is provided

relative to which a metering roller (13) is arranged to form a common metering slot.

US 5638752A

An offset printing press for the printing and in-line coating of materials, the offset printing press comprising, in combination:

a first offset printing unit for printing materials;

a flexographic lacquering unit for partially coating the materials with a first layer of coating fluids having viscosities of between approximately 0.1 and 2.0 Pas inclusive, the flexographic lacquering unit having:

(1) an impression cylinder for carrying the materials,

(2) a form cylinder carrying a typographic printing plate and contacting the materials carried by the impression cylinder for transferring the first layer of coating fluids thereto,

(3) an applicator roller engaging the typographic printing plate on the form cylinder for transferring the coating fluids thereto,

(4) a chamber doctor engaging the applicator roller for applying the coating fluids thereto, the chamber doctor comprising

(a) a positive doctor blade disposed for contacting the applicator roller in its direction of rotation,

(b) a negative doctor blade disposed for contacting the applicator roller counter to its direction of rotation, and

(c) side portions combining with the negative and positive doctor blades to form a chamber having an opening adjacent to and facing the applicator roller, and

(5) a closed fluid transport system comprising

(a) a reservoir containing the coating fluids,

(b) a feed pump for pumping coating fluids from the reservoir to the chamber doctor, and

(c) a suction pump for pumping the coating fluids from the chamber doctor back to the reservoir; and,

a second lacquering unit for fully coating the materials with a second layer of coating fluids, the second lacquering unit being disposed downstream from the flexographic lacquering unit with respect to the direction of movement of the materials through the press.

CHOSEN-DRAWING: Dwg.1/2 Dwg.1/2 Dwg.1/3

TITLE-TERMS: DEVICE LINE COATING PRINT MATERIAL OFFSET PRINT  
MACHINE TWO COLOUR APPLY UNIT PRINT CYLINDER FORME CYLINDER  
APPLY ROLL

DERWENT-CLASS: P74

SECONDARY-ACC-NO:

Non-CPI Secondary Accession Numbers: N1994-249981

660700-96251500

**WEST**[Help](#)[Logout](#)[Interrupt](#)[Main Menu](#)[Search Form](#)[Posting Counts](#)[Show S Numbers](#)[Edit S Numbers](#)[Preferences](#)

Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms  
starting with: INK\$(INK.TBD).P28-P85.

**Search Results -**

Terms	Documents
metallic same white same ink\$ same flexo\$	7

**Database:**

US Patents Full-Text Database  
US Pre-Grant Publication Full-Text Database  
JPO Abstracts Database  
EPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Refine Search:**

metallic same white same ink\$ same  
flexo\$

[Clear](#)**Search History****Today's Date: 4/2/2001**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
USPT	metallic same white same ink\$ same flexo\$	7	<a href="#">L30</a>
USPT	metallic near10 white near10 ink\$ same flexo\$	5	<a href="#">L29</a>
USPT	metallic near5 white near5 ink\$	17	<a href="#">L28</a>
USPT	((427/\$)!.CCLS.) and white near5 flexo\$	3	<a href="#">L27</a>
USPT	((118/\$)!.CCLS.) and white near5 flexo\$	2	<a href="#">L26</a>
USPT	11 and white near5 flexo\$	6	<a href="#">L25</a>
USPT	((427/\$)!.CCLS.) and white near5 ink same flexo\$	6	<a href="#">L24</a>
USPT	((118/\$)!.CCLS.) and white near5 ink same flexo\$	5	<a href="#">L23</a>
USPT	11 and white near5 ink same flexo\$	8	<a href="#">L22</a>
USPT	11 and white near5 ink	125	<a href="#">L21</a>

USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near10 flexo\$	10	<u>L20</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near10 anilox	3	<u>L19</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$ same anilox	1	<u>L18</u>
USPT	((427/\$)!.CCLS.) and (fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$	17	<u>L17</u>
USPT	115 and (fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$	3	<u>L16</u>
USPT	((118/\$)!.CCLS.)	39176	<u>L15</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$ near5 coat\$	19	<u>L14</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) same encapsulat\$ same flexo\$	2	<u>L13</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near10 encapsulat\$ near10 flexo\$	1	<u>L12</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$ near5 flexo\$	1	<u>L11</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 flexo\$	9	<u>L10</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 (coat\$ or encapsulat\$) same flexo\$	6	<u>L9</u>
USPT	(fragran\$ or essence or (scratch\$ near2 sniff)) near5 (coat\$ or encapsulat\$)	739	<u>L8</u>
USPT	11 and fragran\$	16	<u>L7</u>
USPT	11 and essence near4 fragran\$	1	<u>L6</u>
USPT	11 and essence near4 (coat\$ or flexo\$)	2	<u>L5</u>
USPT	11 and scratch near5 sniff	6	<u>L4</u>
USPT	11 and encapsulat\$ near5 essence	1	<u>L3</u>
USPT	11 and essence	258	<u>L2</u>
USPT	((101/\$)!.CCLS.)	48108	<u>L1</u>

DOCUMENT-IDENTIFIER: US 4109572 A  
TITLE: Printing machine for flat articles

## BSPR:

It has therefore been suggested to provide a preliminary operation wherein a layer of substantially white varnish or ink is applied onto the zone to be printed. This zone may thereafter receive the multicolor printing desired without any difficulty. The first operation may be effected by flexography and the second one by the dry offset method. But of course this requires two particular machines.

## DEPR:

The records 19 to be printed are laid by feeding station A (see below) on the right-hand end of the screw conveyor D in FIG. 1. They are thus progressively advanced towards the left until they reach the first sections 34 on screws 16, 17, 18. As clearly shown in FIG. 5 they follow in these sections the thread referenced 35 since the latter forms an extension of the thread 35a in which they had been disposed. As soon as one of them, as for instance the first one, comes in the mean vertical plane of the corresponding fork 23 (FIG. 5) it is raised by the latter which rises under the action of cam 30 (FIG. 6) without engaging the following or second record carried by the screws. The raised record is thus brought to the level of the flexography printing station B. Owing to the shape of the printing sectors 8, 9, it is not inked during this ascending motion, but when fork 23 returns to its lower position, these sectors apply to the central portion of both sides of the record a thick layer of a white or light color varnish or ink adapted to act as a background for the further printing in station C.

## CCOR:

101/37

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw	Desc	Image
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Generate Collection

Terms	Documents
11 and white near5 ink same flexo\$	8

Display

50

Documents, starting with Document:

8

Display Format:

KWIC

Change Format

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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### 3. Document ID: US 5079044 A

L16: Entry 3 of 3

File: USPT

Jan 7, 1992

DOCUMENT-IDENTIFIER: US 5079044 A

TITLE: Offset coating apparatus with external cooling

#### BSPR:

It is known to those skilled in the art that coating devices generally contain a horizontal coating or transfer cylinder which picks up a coating liquid from a liquid-containing pan, which is positioned under the transfer cylinder so that only a lower portion of the rotating transfer cylinder is immersed in the coating liquid. As the transfer cylinder rotates, the outer cylindrical surface thereof picks up the coating liquid. Although this liquid coating on the roller surface is generally very thin, it typically is not sufficiently thin to provide a properly functional coating thickness. If the coating liquid is a glue, for example, the thickness should range from about 3 mils to about 5 mils. If the coating thickness of glue is too thin, the necessary adhesion may not result; if gloss is being applied, it may not be sufficiently shiny; and if a scratch-off substance, one may be able to see through it and be able to read the covered indicia. Similarly, if a coating of micro-encapsulated fragrance is too thin, the bubbles may break and the fragrance prematurely released. On the other hand, if it is too thick, glue, for example, may "glob-up" and dry too slowly or unevenly, or it may totally fail to dry.

CCXR:

118/262

CCXR:

118/602

CCXR:

118/69

Full	Title	Citation	Front	Review	Classification	Date	Reference	Claims	KWIC	Draw. Desc	Image
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Generate Collection

Terms	Documents
115 and (fragran\$ or essence or (scratch\$ near2 sniff)) near5 encapsulat\$	3



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Terms	Documents
lithoflex\$	3

Database: [All Databases \(USPT + EPAB + JPAB + DWPI + TDBD\)](#)

lithoflex\$

Refine Search:

**Search History**

<u>DB Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
ALL	lithoflex\$	3	<u>L3</u>
USPT	lithoflex\$	3	<u>L2</u>
USPT	lithoflex	0	<u>L1</u>

	U	1	Document ID	Issue Date	Pages	Title	Current OR
1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5309839 A	19940510	7	Method and apparatus for facilitating the printing of verso sides and the varnishing of recto sides of sheets	101/483
2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 5016529 A	19910521	7	Sheet-fed rotary printing press for multi-color printing	101/211
3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4732084 A	19880322	5	Sheet-fed rotary printing machine for single-side multicolor printing and perfecter printing	101/177
4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4664949 A	19870512	7	Printing machine for printing and final varnishing of sheets	427/210
5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4621576 A	19861111	6	Sheet-fed rotary printing presses for single-side printing or first form and perfecter printing	101/230
6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	US 4188883 A	19800219	7	Rotary printing machine	101/183

✓ 4308796 143144

	Current XRef	Retrieval Classif	Inventor	S	C	P	2	3	4	5
1	101/229 ; 101/231 ; 118/46 ; 427/211 ; 427/288		Hartung, Georg , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	101/183 ; 101/229		Jahn, Hans-Georg	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	101/183 ; 101/230		Wirz, Arno	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	101/229 ; 118/46 ; 427/211 ; 427/288		Greiner, Harry M. , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	101/217		Wirz, Arno	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	101/230		Schone, Helmut , et al.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>